Applicant: James A. Matthews Serial No.: 10/632,167 Filed: July 30, 2003 Docket No.: 10030278-1

Title: INTEGRATED OPTICAL DETECTOR AND DIFFRACTIVE OPTICAL ELEMENT

# IN THE DRAWINGS

Please add the attached new Figures 4A, 4B, 5A, and 5B.

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## **REMARKS**

The following remarks are made in response to the Office Action mailed August 5, 2005. Claims 2-3, 8-9, and 12-18 have been cancelled without prejudice. Claims 1-19 were rejected. With this Response, claims 1, 4, 7, and 10-11 have been amended and claims 20-23 have been added. Claims 1, 4-7, 10-11, and 19-23 remain pending in the application and are presented for reconsideration and allowance.

## **Objections to the Specification**

The Examiner objected to the specification because of an informality in paragraph [0019], line 1.

Applicant has amended paragraph [0019] to correct the informality referenced by the Examiner. In addition Applicant has corrected other informalities in paragraph [0019].

Therefore, Applicant respectfully requests that this objection to the specification be withdrawn.

### **Objections to the Drawings**

The Examiner objected to the drawings under 37 C.F.R. 1.83(a) because the drawings must show every feature of the invention specified in the claims.

As to the objection to the drawing regarding claim 17 and 18, claim 17 and 18 have been cancelled without prejudice, so this objection no longer applies.

As to the objection to claims 8 and 15, amended independent claim 1 now includes the limitations of a diffractive optical element including a plurality of stacked layers of optically transmissive material formed on the substrate, wherein at least one of the layers of optically transmissive material is a sensing element that is responsive to incident light. These features and limitations are now illustrated in new Figures 4A-4B and 5A-5B. Paragraphs [0023] and [0024] of the original specification support these limitations. In addition, the original Figures 2A-2B and the corresponding description provide further support for the new Figures 4A-4B and 5A-5B. Therefore, no new matter has been added to the specification.

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Therefore, Applicant respectfully requests that any objection to the drawings based on features in amended independent claim 1 be withdrawn and amended independent claim 1 be allowed.

The Examiner objected to the drawings as failing to comply with 37 C.F.R. 1.84(p)(5) because they including reference characters not mentioned in the description.

Applicant has correspondingly amended paragraph [0025] of the specification to include a description of elements 301 and 305 shown in Figures 3B which corresponds to the similar description for elements 201 and 205 shown in Figure 2B to now clearly indicate that the integrated detector 300 is formed on a substrate 301, which can be similar to substrate 201 shown in Figure 7B. In addition, an optical protective oxide layer 305 covers the diffractive optical element 302 and sensing element 307.

Therefore, Applicant respectfully requests withdrawal of this object to the drawings.

### Claim Objections

The Examiner objected to claims 2, 3, and 13 because of informalities.

Applicant has cancelled claims 2, 3, and 13 without prejudice so these objections no longer apply

# Claim Rejections under 35 U.S.C. § 102 and 35 U.S.C. § 103

The Examiner rejected claims 1-9 and 19 under 35 U.S.C. § 102(b) as being anticipated by the Lott et al. U.S. Patent No. 5,892,786.

The Examiner rejected claims 1, 2, and 17-19 under 35 U.S.C. § 102(e) as being anticipated by the Morris, Jr. et al. U.S. Patent No. 6,452,669.

The Examiner rejected claims 3-7 and 9-16 under 35 U.S.C. § 103(a) as being unpatentable over the Morris et al. U.S. Patent No. 6,452,669 in view of the Lott et al. U.S. Patent No. 5,892,786.

Applicant has amended independent claim 1 to now claim a diffractive optical element including a plurality of stacked layers of optically transmissive material formed on the substrate, wherein at least one of the layers of optically transmissive material is a sensing

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element that is responsive to incident light. These limitations are not taught or suggested by the Lott et al. patent or the Morris et al. patent alone or in combination.

Furthermore, dependent claims 4-7, 10-11, and 19 further define patentably distinct amended independent claim 1.

Therefore, Applicant respectfully requests reconsideration and withdrawal of the above rejections to claims 1, 4-7, 10-11, and 19, and allowance of these claims.

## **New Claims**

Applicant has added new dependent claims 20-23.

New dependent claims 20-23 further define patentably distinct amended independent claim 1. Therefore, these new dependent claims are also believed to be allowable.

Therefore, Applicant respectfully requests allowance of new claims 20-23.

## **CONCLUSION**

In view of the above, Applicant respectfully submits that pending claims 1, 4-7, 10-11, and 19-23 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 1, 4-7, 10-11, and 19-23 is respectfully requested.

No fees are required under 37 C.F.R. 1.16(h)(i). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 50-1078.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application.

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Any inquiry regarding this Amendment and Response should be directed to Patrick G. Billig at Telephone No. (612) 573-2003, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

Agilent Technologies, Inc.

**Intellectual Property Administration** Legal Department, M/S DL429 P.O. Box 7599 Loveland, CO 80537-0599

Respectfully submitted,

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CERTIFICATE UNDER 37 C.F.R. 1.8: The undersigned hereby certifies that this paper or papers, as described herein, are being deposited in the United States Postal Service, as first class mail, in an envelope address to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this day of December, 2005.

Name: Patrick G. Billig